

CLAIMS

1. A camera control system capable of controlling a video camera from a plurality of computer terminals via a network, comprising:

control means for controlling the video camera on the basis of a control command from one of the plurality of computer terminals; and

automatic control means for executing automatic control of the video camera if the control command for the video camera is not received from any of the plurality of computer terminals.

2. A camera control system according to claim 1, wherein said automatic control means executes automatic control of the video camera if the control command is not received for a predetermined time period.

3. A camera control system according to claim 1, further comprising:

video transmitting means for transmitting a video image of the video camera in response to a request from each of the plurality of computer terminals,

wherein said automatic control means stops automatic control of the video camera if the video image of the video camera is not outputted from said video transmitting means.

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4. A camera control system according to claim 1,
further comprising:

issuing means for issuing a control right of the
video camera to one of the plurality of computer terminals
which makes a request to acquire the control right of the
video camera which is required for said control means to
control the video camera,

wherein said automatic control means executes
automatic control of the video camera if the control right
of the video camera is not issued to any of the plurality of
computer terminals by said issuing means.

5. A camera control system according to claim 4,
wherein said automatic control means executes automatic
control of the video camera if a predetermined time period
elapses after the control right of the video camera is
released.

6. A camera control system according to claim 4,
further comprising:

video transmitting means for transmitting a video
image of the video camera in response to a request from each
of the plurality of computer terminals,

wherein said automatic control means stops
automatic control of the video camera if the video image of
the video camera is not outputted from said video
transmitting means to any computer terminal other than the
computer terminal to which the control right of the video

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camera is issued.

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7. A camera control system according to claim 4, wherein said issuing means issues control rights of a predetermined plurality of video cameras to one computer terminal.

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8. A camera control system according to claim 7, wherein said automatic control means executes automatic control of the predetermined plurality of video cameras if the control rights of the predetermined plurality of video cameras are not issued to any of the computer terminals by said issuing means.

9. A camera control system according to claim 7, wherein said automatic control means executes automatic control of the predetermined plurality of video cameras excluding a video camera whose control right is received, if the control rights of the predetermined plurality of video cameras are issued to one computer terminal by said issuing means.

10. A camera control system according to claim 7, wherein said automatic control means executes automatic control of video cameras whose control rights are not received for a predetermined time period, from among the predetermined plurality of video cameras, if the control rights of the predetermined plurality of video cameras are issued to one computer terminal by said issuing means.

11. A camera control system according to claim 1, further comprising:

storage means for storing a loci of an image pickup direction of the video camera,

wherein said automatic control means executes automatic control of the video camera on the basis of the loci of the image pickup direction of the video camera, which is stored in said storage means.

12. A camera control system according to claim 1, further comprising:

storage means for storing at least one image pickup direction of the video camera,

wherein said automatic control means executes automatic control of the video camera in the at least one image pickup direction stored in said storage means.

13. A camera control system according to claim 12, wherein said storage means stores an image pickup direction relative to a central position in a range in which the video camera can pick up an image.

14. A camera control system according to claim 11 or 12, wherein said storage means stores at least one of a zoom magnification, a subject distance and an on/off state of a backlight correction of the video camera, correspondingly with the image pickup direction of the video camera.

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15. A camera control system according to claim 1, further comprising:

measuring means for dividing a range of a controllable image pickup direction of the video camera into a plurality of ranges and measuring a time period which elapses when the video camera is being controlled in accordance with a control command from one of the plurality of computer terminals in each of the plurality of divided ranges,

wherein said automatic control means controls an image pickup direction of the video camera within a particular range of the plurality of divided ranges in which particular range a total of the time periods measured by said measuring means is largest.

16. A camera control system according to claim 8, further comprising:

video transmitting means for transmitting a video image of the video camera in response to a video transmission request from each of the plurality of computer terminals,

wherein if automatic control is being executed by said automatic control means, said video transmitting means transmits video signals from the predetermined plurality of video cameras to a computer terminal which has made the video transmission request, while changing over the video signals at intervals of a predetermined time period.

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17. A camera control system according to claim 4, further comprising:

video transmitting means for transmitting a video image of the video camera in response to a video transmission request from each of the plurality of computer terminals;

counting means for counting at least one of the number of times by which the control right has been issued to each of a predetermined plurality of video cameras by said issuing means, the number of times by which a request to acquire the control right of each of the predetermined plurality of video cameras has been received from the plurality of computer terminals, and the number of times by which said video transmitting means has transmitted a video image from each of the predetermined plurality of video cameras to the plurality of computer terminals; and

changeover means for controlling changeover time periods of outputting of video signals of the predetermined plurality of video cameras, on the basis of the number of times counted by said counting means,

wherein if automatic control is being executed by said automatic control means, said video transmitting means changes over the video images from the predetermined plurality of video cameras on the basis of the changeover time periods controlled by said changeover means and outputs a video image to a computer terminal which has made the video transmission request.

18. A camera control system according to claim 17,
wherein said changeover means controls the changeover time
periods of outputting of the video signals of the
predetermined plurality of video cameras in proportion to
the number of times counted by said counting means.

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19. A camera control system comprising:
control means for controlling a video camera;
automatic control means for executing automatic
control of the video camera if a control command for the
video camera is not received from a computer terminal;
a plurality of computer terminals for enabling
said control means to output the control command for the
video camera via a network; and
said video camera controlled by said control
means.

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20. A control method for a camera control system
capable of controlling a video camera from a plurality of
computer terminals via a network, said control method
comprising:

a control step of controlling the video camera on
the basis of a control command from one of the plurality of
computer terminals; and

an automatic control step of executing automatic
control of the video camera if the control command for the
video camera is not received from any of the plurality of

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computer terminals.

21. A control method according to claim 20, wherein said automatic control step executes automatic control of the video camera if the control command is not received for a predetermined time period.

22. A control method according to claim 20, further comprising:

a video transmitting step of transmitting a video image of the video camera in response to a request from each of the plurality of computer terminals,

wherein said automatic control step stops automatic control of the video camera if the video image of the video camera is not outputted by said video transmitting step.

23. A control method according to claim 20, further comprising:

an issuing step of issuing a control right of the video camera to one of the plurality of computer terminals which makes a request to acquire the control right of the video camera which is required for said control step to control the video camera,

wherein said automatic control step stops automatic control of the video camera if the control right of the video camera is not issued to any of the plurality of computer terminals by said issuing step.

24. A control method according to claim 23, wherein said automatic control step executes automatic control of the video camera if a predetermined time period elapses after the control right of the video camera is released.

25. A control method according to claim 23, further comprising:

a video transmitting step of transmitting a video image of the video camera in response to a request from each of the plurality of computer terminals,

wherein said automatic control step stops automatic control of the video camera if the video image of the video camera is not outputted by video transmitting step to any computer terminal other than the computer terminal to which the control right of the video camera is issued.

26. A control method according to claim 23, wherein said issuing step issues control rights of a predetermined plurality of video cameras to one computer terminal.

27. A control method according to claim 26, wherein said automatic control step executes automatic control of the predetermined plurality of video cameras if the control rights of the predetermined plurality of video cameras are not issued to any of the computer terminals by said issuing step.

28. A control method according to claim 26, wherein said automatic control step executes automatic control of the predetermined plurality of video cameras excluding a video camera whose control right is received, if the control rights of the predetermined plurality of video cameras are issued to one computer terminal by said issuing step.

29. A control method according to claim 26, wherein said automatic control step executes automatic control of video cameras whose control rights are not received for a predetermined time period, from among the predetermined plurality of video cameras, if the control rights of the predetermined plurality of video cameras are issued to one computer terminal by said issuing step.

30. A control method according to claim 20, further comprising:

a storage step of storing a loci of an image pickup direction of the video camera,

wherein said automatic control step executes automatic control of the video camera on the basis of the loci of the image pickup direction of the video camera, which is stored by said storage step.

31. A control method according to claim 20, further comprising:

a storage step of storing at least one image pickup direction of the video camera,

wherein said automatic control step executes automatic control of the video camera in the at least one image pickup direction stored by said storage step.

32. A control method according to claim 31, wherein said storage step stores an image pickup direction relative to a central position in a range in which the video camera can pick up an image.

33. A control method according to claim 30 or 31, wherein said storage step stores at least one of a zoom magnification, a subject distance and an on/off state of a backlight correction of the video camera, correspondingly with the image pickup direction of the video camera.

34. A control method according to claim 20, further comprising:

a measuring step of dividing a range of a controllable image pickup direction of the video camera into a plurality of ranges and measuring a time period which elapses when the video camera is being controlled in accordance with a control command from one of the plurality of computer terminals in each of the plurality of divided ranges,

wherein said automatic control step controls an image pickup direction of the video camera within a particular range of the plurality of divided ranges in which particular range a total of the time periods measured by

said measuring step is largest.

35. A control method according to claim 27, further comprising:

a video transmitting step of transmitting a video image of the video camera in response to a video transmission request from each of the plurality of computer terminals,

wherein if automatic control is being executed by said automatic control step, said video transmitting step transmits video signals from the predetermined plurality of video cameras to a computer terminal which has made the video transmission request, while changing over the video signals at intervals of a predetermined time period.

36. A camera control system according to claim 23, further comprising:

a video transmitting step of transmitting a video image of the video camera in response to a video transmission request from each of the plurality of computer terminals;

a counting step of counting at least one of the number of times by which the control right has been issued to each of a predetermined plurality of video cameras by said issuing step, the number of times by which a request to acquire the control right of each of the predetermined plurality of video cameras has been received from the plurality of computer terminals, and the number of times by

which said video transmitting step has transmitted a video image from each of the predetermined plurality of video cameras to the plurality of computer terminals; and

a changeover step of controlling changeover time periods of outputting of video signals of the predetermined plurality of video cameras, on the basis of the number of times counted by said counting step,

wherein if automatic control is being executed by said automatic control step, said video transmitting step changes over the video images from the predetermined plurality of video cameras on the basis of the changeover time periods controlled by said changeover step and outputs a video image to a computer terminal which has made the video transmission request.

37. A control method according to claim 36, wherein said changeover step controls the changeover time periods of outputting of the video signals of the predetermined plurality of video cameras in proportion to the number of times counted by said counting step.

38. A storage medium which stores therein a program for executing control over a camera control system capable of controlling a video camera from a plurality of computer terminals via a network, said program comprising processes of:

controlling the video camera on the basis of a control command from one of the plurality of computer

terminals; and

executing automatic control of the video camera if the control command for the video camera is not received from any of the plurality of computer terminals.

39. A storage medium according to claim 38, wherein said program further comprises a process of executing automatic control of the video camera if the control command is not received for a predetermined time period.

40. A storage medium according to claim 38, wherein said program further comprises processes of:

transmitting a video image of the video camera in response to a request from each of the plurality of computer terminals, and

stopping automatic control of the video camera if the video image of the video camera is not outputted.

41. A storage medium according to claim 38, wherein said program further comprises processes of:

issuing a control right of the video camera to one of the plurality of computer terminals which makes a request to acquire the control right of the video camera which is required to control the video camera; and

executing automatic control of the video camera if the control right of the video camera is not issued to any of the plurality of computer terminals.

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42. A storage medium according to claim 41, wherein said program further comprises a process of executing automatic control of the video camera if a predetermined time period elapses after the control right of the video camera is released.

43. A storage medium according to claim 41, wherein said program further comprises processes of:

transmitting a video image of the video camera in response to a request from each of the plurality of computer terminals; and

stopping automatic control of the video camera if the video image of the video camera is not outputted to any computer terminal other than the computer terminal to which the control right of the video camera is issued.

44. A storage medium according to claim 41, wherein said program further comprises a process of issuing control rights of a predetermined plurality of video cameras to one computer terminal.

45. A storage medium according to claim 44, wherein said program further comprises a process of executing automatic control of the predetermined plurality of video cameras if the control rights of the predetermined plurality of video cameras are not issued to any of the computer terminals.

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46. A storage medium according to claim 44, wherein said program further comprises a process of executing automatic control of the predetermined plurality of video cameras excluding a video camera whose control right is received, if the control rights of the predetermined plurality of video cameras are issued to one computer terminal.

47. A storage medium according to claim 44, wherein said program further comprises a process of executing automatic control of video cameras whose control rights are not received for a predetermined time period, from among the predetermined plurality of video cameras, if the control rights of the predetermined plurality of video cameras are issued to one computer terminal.

48. A storage medium according to claim 38, wherein said program further comprises processes of storing a loci of an image pickup direction of the video camera, and executing automatic control of the video camera on the basis of the loci of the image pickup direction of the video camera which is stored.

49. A storage medium according to claim 38, wherein said program further comprises processes of storing at least one image pickup direction of the video camera, and executing automatic control of the video camera in the stored at least one image pickup direction.

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50. A storage medium according to claim 49, wherein said program further comprises a process of storing an image pickup direction relative to a central position in a range in which the video camera can pick up an image.

51. A storage medium according to claim 48 or 49, wherein said program further comprises a process of storing at least one of a zoom magnification, a subject distance and an on/off state of a backlight correction of the video camera, correspondingly with the image pickup direction of the video camera.

52. A storage medium according to claim 38, wherein said program further comprises processes of dividing a range of a controllable image pickup direction of the video camera into a plurality of ranges and measuring a time period which elapses when the video camera is being controlled in accordance with a control command from one of the plurality of computer terminals in each of the plurality of divided ranges, and controlling an image pickup direction of the video camera within a particular range of the plurality of divided ranges in which particular range a total of the measured time periods is largest.

53. A storage medium according to claim 45, wherein said program further comprises processes of transmitting a video image of the video camera in response to a video

transmission request from each of the plurality of computer terminals, and, if automatic control is being executed, transmitting video signals from the predetermined plurality of video cameras to a computer terminal which has made the video transmission request, while changing over the video signals at intervals of a predetermined time period.

54. A storage medium according to claim 41, wherein said program further comprises processes of:

transmitting a video image of the video camera in response to a video transmission request from each of the plurality of computer terminals;

counting at least one of the number of times by which the control right has been issued to each of a predetermined plurality of video cameras, the number of times by which a request to acquire the control right of each of the predetermined plurality of video cameras has been received from the plurality of computer terminals, and the number of times by which a video image has been transmitted from each of the predetermined plurality of video cameras to the plurality of computer terminals;

controlling changeover time periods of outputting of video signals of the predetermined plurality of video cameras, on the basis of the counted number of times; and

if automatic control is being executed, changing over the video images from the predetermined plurality of video cameras on the basis of the controlled changeover time periods and outputting a video image to a computer terminal

which has made the video transmission request.

55. A storage medium according to claim 54, wherein said program further comprises a process of controlling the changeover time periods of outputting of the video signals of the predetermined plurality of video cameras in proportion to the counted number of times.

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